

**METHOD AND APPARATUS FOR DRIVING A LIQUID CRYSTAL DISPLAY BY
GENERATING COLOR-SPECIFIC GRAY VOLTAGES**

ABSTRACT OF DISCLOSURE

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The invention is an apparatus for driving a liquid crystal display. In the invention, the digital data signals for different pixels are converted to analog signals based on color-specific gray voltages. By providing color-specific gray voltages, the invention corrects any bias stemming from different electro-optical characteristics of different-colored 10 pixels. In one embodiment, the invention includes a signal controller for generating digital data signals for different pixel colors and a gray voltage generator for generating gray voltage signals that are specific to the different pixel colors. A data driver, which is coupled to the gray voltage generator and the signal controller, converts each one of the digital signals to a corresponding analog signal by using one of the gray voltage signals that is associated with 15 the same pixel color as the digital signal that is being converted.